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Title : Bottlenose dolphins (Tursiops truncatus) in the Galveston Bay system: Evidence for adjacent communities with strongly different social groups

Category : Ecology

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Abstract : Bottlenose dolphins occur in the Galveston Bay system year round, with site fidelity and area use patterns varying between three distinct sub areas. In the Houston and Galveston Ship Channel, an open population occurs; 240 individuals were photo-identified over a three year period (1990-1992), with 75% (180) resighted overall, 23% (56) resighted each year, and 19 (8%) seen in the area as early as 1986-1987. No pulsed recruitment or net change in population size was detected throughout that three year period. Association patterns of dolphins in the bay and along the adjacent Gulf coast indicated high group fluidity and few strong associations. During 1999 and 2000, an open population used the adjacent coastline; 506 dolphins were photo-identified and only 15% resighted, suggesting low site fidelity by only a few individuals. In 1995-1996, a separate community of 37 recognizable individuals identified in San Luis Pass (48 km south of Galveston Bay) showed strong site fidelity (12 seen as early as 1990) and exhibited only a small degree of movement between San Luis Pass and Galveston Bay. Coefficients of associations ranged from 0.00 to 0.83 (mean = 0.46), and male pairs formed the second-most stable bonds after mother-calf pairs. Using biopsy samples and genetic analysis, we are presently testing the hypothesis that this unique more stable community is genetically distinct from neighboring Galveston Bay dolphins and adjacent Gulf dolphins, and we are studying paternity and the role of kinship in these relatively stable social groups.